

PATENT COOPERATION TREATY

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REC'D 16 SEP 2005

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT (PCT Article 36 and Rule 70)



Applicant's or agent's file reference SCB 829 PCT	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA416)	
International application No. PCT/EP 03/14702	International filing date (day/month/year) 22.12.2003	Priority date (day/month/year) 15.04.2003
International Patent Classification (IPC) or both national classification and IPC A23L1/221		
Applicant INDENA S.P.A. et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.
 - ☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the opinion
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 28.10.2004	Date of completion of this report 16.09.2005
Name and mailing address of the International preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized Officer Tallgren, A Telephone No. +31 70 340-3933 

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EXAMINATION REPORT**

International application No. **PCT/EP 03/14702**

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17))*):

Description, Pages

1-13 as originally filed

Claims, Numbers

1-11 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
☐ the language of publication of the international application (under Rule 48.3(b)).
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority in written form.
☐ furnished subsequently to this Authority in computer readable form.
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
☐ the claims, Nos.:
☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

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**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

1. Statement

Novelty (N)	Yes: Claims	1-11
	No: Claims	
Inventive step (IS)	Yes: Claims	
	No: Claims	1-11
Industrial applicability (IA)	Yes: Claims	1-11
	No: Claims	

2. Citations and explanations

see separate sheet

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EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/EP 03/14702

1. The following documents (D) are referred to in this communication; the numbering will be adhered to in the rest of the procedure:

- D1: FR-A-1 156 084 (MCCORMICK & COMPANY) 12 May 1958 (1958-05-12)
- D2: RUIZ-TERAN F ET AL: "Enzymatic extraction and transformation of glucovanillin to vanillin from vanilla green pods." JOURNAL OF AGRICULTURAL AND FOOD CHEMISTRY 49 (11) 5207-5209 2001
CORRESPONDENCE (REPRINT) ADDRESS, A. LOPEZ-MUNGUIA, INST. DE BIOTEC., UNAM, APDO. POSTAL 510-3, CUERNAVACA, MOR. 62271, MEXICO. TEL. 52-56 22 76 37. FAX 52-73 17 23 88. E-MAIL AGUSTIN(XP002275039
- D3: WO 93/25088 A (MANE JEAN ;MANE V FILS SA (FR); ZUCCA JOSEPH (FR))
23 December 1993 (1993-12-23)
- D4: WO 93/04597 A (PERNOD RICARD) 18 March 1993 (1993-03-18)
- D5: EP-A-0 354 118 (ELF AQUITAINE) 7 February 1990 (1990-02-07)

2. INVENTIVE STEP OBJECTIONS

D2 describes processes for the preparation of a vanilla extract. Traditional process contains curing/browning at 60°C followed by incubation. Enzymatic process comprises a) treatment with cellulase and hemicellulase enzymes, b) purification with ethanol to a vanillin enriched concentrate (see relevant passages search report).

D3 describes a process for the preparation of a vanilla extract comprising heat treatment with 45°C, cellulase and hemicellulase treatment (15-60°C, 1-48 hours) and final ethanol extraction to recover vanilla extract (see relevant passages search report).

D4 describes a process for the preparation of a vanilla extract comprising incubation, cellulase and hemicellulase treatment (3-30 hours, pH 3-7, 30-40°C) and final ethanol extraction to recover vanilla extract (see relevant passages search report).

D1 describes a process for manufacturing vanilla extract comprising browning of beans between 20-80°C (viellissement), extraction with ethanol, enzymatic treatment (cellulase and hemicellulase mentioned (see relevant passages search report)) and finally

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purification with ethanol. A skilled person, especially when being aware of D2-D4, would use cellulase and hemicellulase as preferred enzymes. Consequently, the subject matter of claim 1 is considered as being not inventive in view of D1-D4 (Art 33(3) PCT).

Dependent claims 2-11 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of inventive step, the reasons being as follows:

The features of dependent claims 2-11 have already been employed for the same purpose (see documents D1-D5). It would therefore be obvious to the person skilled in the art, to apply these features with corresponding effect. Consequently, the subject matter of claims 2-11 is considered as being not inventive in view of D1-D5 (Art 33(3) PCT).

None of the in claims 1-11 listed processes is considered to be inventive in view of D1-D5 (Art 33(3) PCT). Having regard to the claimed processes and the prior art known (D1-D5), it is considered that the man skilled in the art would regard these processes of the present invention (as far as novel) as an obvious alternative to those known. Therefore, unless an unexpected effect for the present processes (as far as novel) over the prior art disclosure from D1-D5 can be demonstrated, these processes do not fulfill the requirements of Art 33(3) PCT.